

REMARKS

Claims 1 and 3-7 are pending in this application and stand rejected. Claim 1 has been amended. Claim 1 is independent.

The Rejections Under 35 U.S.C. § 103

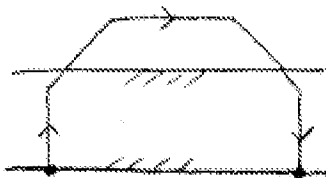
Claims 1, 3 and 5-7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over what the Office Action referred to as Applicant's admitted prior art ("AAPA") in view of U.S. Patent No. 4,506,577 to Shinomiya. Applicant respectfully traverses this rejection, and submits that one skilled in the art would not be led to the claimed invention for at least the following reasons.

Applicant's invention, as set out in claim 1, involves a method for controlling a slitter-scoring apparatus. This is done by supplying a paperboard sheet along a feed line, and moving a slitter/scorer including at least one of a slitter and a scorer in at least one of a vertical and a widthwise direction to an operative level where a surface of the paperboard sheet is processed thereby. When the slitter/scorer moves from a first widthwise position of a first operative position to a second widthwise position of a second operative position, the slitter/scorer is caused to start moving only in the vertical direction while a level of the at least one of the slitter/scorer is between a bottom surface of the paperboard sheet and a top surface of the paperboard sheet, and the slitter/scorer is moved simultaneously in the vertical direction and in a cross machine direction from the first widthwise position to the second widthwise position so that the slitter/scorer moves diagonally toward the second cross machine position before the

slitter/scorer moves only in the vertical direction and after the slitter/scorer moves only in the vertical direction.

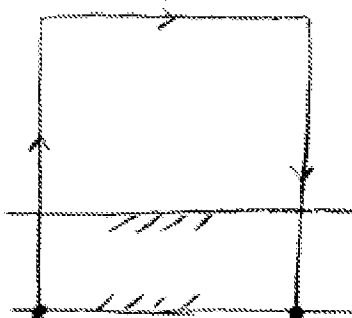
Thus, it will be appreciated that according to claim 1, the travel path of the slitter/scorer, and in particular, the direction of the diagonal movement of the slitter/scorer, has been specified with clarity.

Claim 1 covers the travel path shown below:



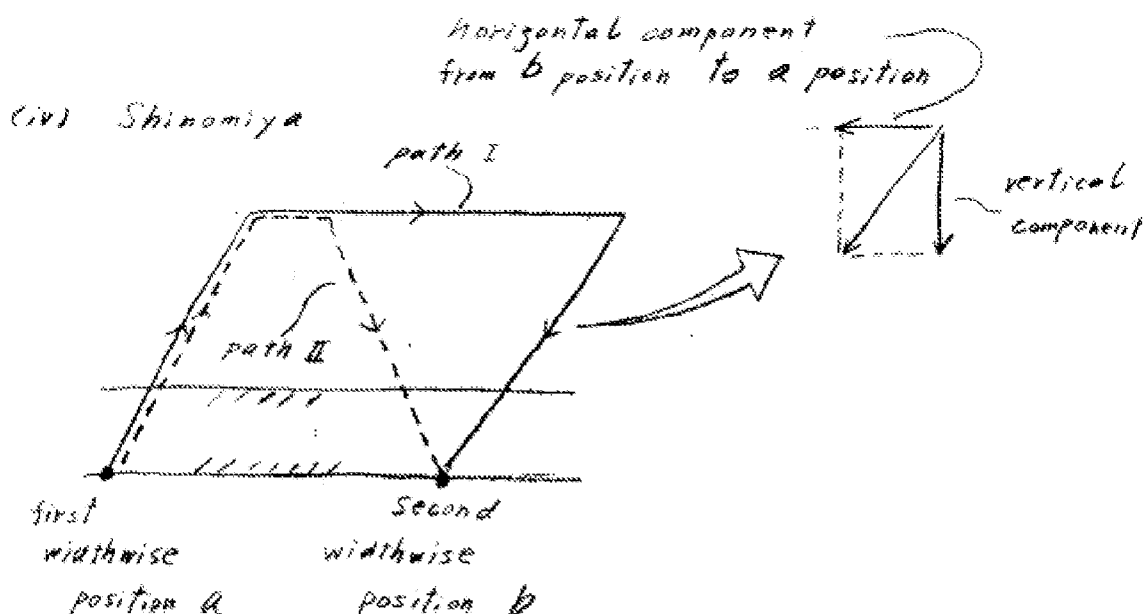
A travel path of a slitter/scorer as recited in claim 1 can prevent meandering of the sheet, while at the same time decrease the time needed to set up the slitter/scorer.

The AAPA merely discloses a reversed-C shaped travel path of a slitter, but does not even suggest there by a diagonal movement of the slitter which can prevent the meandering of the sheet, as shown below:

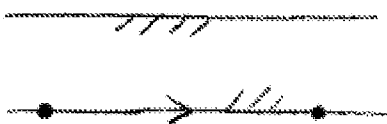


In the AAPA's path, it takes much longer to set up the slitter for the next positioning as compared to the present invention.

Nor does Shinomiya remedy the deficiencies of the AAPA. In Shinomiya, the travel path of the slitter is something like that shown below, due to the upper end of the cutter being connected to the screw rod:



Nor does Japanese Laid-Open Patent Appln. No. 8-11245, which the Office Action applies in the rejection of claim 4, discussed below, remedy the deficiencies of the AAPA and Shinomiya. JP 8-11245 discloses a travel path in a horizontal line with no diagonal movement, which can decrease such a setting up time period, but which also causes the meandering of the sheet, as below:



Thus, it will be appreciated that in Shinomiya, unlike the AAPA or JP 8-11245, diagonal movement of the cutter is disclosed. However, such diagonal movement of the cutter

only would be possible when the cutter is moved upwardly or downwardly, and the diagonal movement when the cutter is moved upwardly has to be made parallel to that when the cutter is moved downwardly, so that the shape of the travel path of the cutter will be a parallelogram.

Further, as show above, when the cutter is moved in a downward and diagonal direction to a second widthwise position, the horizontal component of the diagonal movement is oriented from the second widthwise position to the first one.

Therefore, Shinomiya does not suggest at least the aspects of the present invention relating to having the slitter/ scorer move simultaneously in the vertical direction and in a cross machine direction from the first widthwise position to the second widthwise position.

Further, as will be appreciated by comparing path II (a dotted line) with path I (a solid line), the total length of the travel path disclosed in Shinomiya will be longer than the travel path of the present invention, and so does not shorten the time for setting up a slitter.

The AAPA discloses a reversed-C shaped slitter travel path without diagonal movement of the slitter which can prevent the meandering of the sheet but it takes longer to set up the slitter for the next positioning.

JP 8-11245 discloses a travel path in a horizontal line with no diagonal movement which can decrease such the set-up time, but doing so can cause meandering of the sheet.

Therefore, even if the AAPA, Shinomiya and JP 8-11245 are combined, the travel path of the slitter with the diagonal movement of the slitter/scorer after the vertical movement, and the diagonal movement of the slitter/scorer before the vertical movement according to this invention cannot be realized.

For all the foregoing reasons, favorable reconsideration and withdrawal of this rejection are respectfully requested.

Claim 4 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Shinomiya, as applied to claims 1, 3 and 5-7, and further in view of Japanese Laid-Open Patent Appln. No. 8-11245. Applicant respectfully traverses this rejection, and submits the following arguments in support thereof.

Claim 4 depends from, and so incorporates by reference all the features of claim 1, including those features just shown to avoid the cited art. Claim 4 therefore patentably distinguishes over that art at least for same reasons as claim 1, which reasons are incorporated by reference herein.

Favorable reconsideration and withdrawal of this rejection are respectfully requested.

CONCLUSION

Applicants respectfully submit that all outstanding rejections have been addressed and are now either overcome or moot. Applicants further submit that all claims pending in this application are patentable over the prior art. Accordingly, favorable consideration and prompt allowance of this application are respectfully requested.

Other than the extension fee authorized in the accompanying Petition for Extension of Time, no fees are believed to be due. Nevertheless, should the Commissioner deem any fee(s) to be now or hereafter due in connection with this application, authority is given to charge all such fees to Deposit Account No. 19-4709.

In the event that there are any questions, or should additional information be required, please contact Applicants' attorney at the number listed below.

Respectfully submitted,

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